

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/5/10 has been entered.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15, 17, 21-25, 27 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vilella U.S. Patent 6,681,038 in view of Beers et al. U.S. Patent 5,680,936.

5. Regarding claims 15 and 29, Vilella discloses a method of manufacturing a high-frequency assembly having a plurality of components, at least one of which is frequency-specific, using an automatic assembly apparatus, the method comprising: identifying a

frequency-encoding feature on a frequency-specific component (col. 2, lines 54-62; col. 8, lines 12-23); accepting the frequency-specific component for connection to the high-frequency assembly if the frequency-encoding feature indicates that the frequency-specific component is a correct component for the assembly (col. 3, lines 33-49; col. 4, lines 37-47); and rejecting the frequency-specific component for connection to the high-frequency assembly if the frequency-encoding feature indicates that the frequency-specific component is not the correct component for the assembly (col. 3, lines 33-49; col. 4, lines 37-47).

Regarding claim 15 and 29, Vilella does not expressly disclose a placing apparatus for placing a plurality of components on an assembly, including a frequency-specific component.

Beers discloses placing components which includes a frequency-specific component with an automatic assembly apparatus (col. 1, lines 14-27).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a placing apparatus to place components when assembling an electrical device and test the frequency specific component before placing it. One of ordinary skill in the art would have been motivated to do this since placing apparatuses are commonly used in the assembly of electronics (col. 1, lines 14-27).

Therefore, it would have been obvious to modify Vilella with Beers to obtain the invention as specified in claims 15, 17, 21, 29-31 and 34.

Regarding claims 17, 21, 30 and 31, Beers discloses searching for the frequency-encoding feature at a plurality of locations on the frequency-specific component (col. 2, lines 54-62); and determining an orientation of the frequency-specific component based on a location at

which the frequency-encoding feature is found in relation to a reference edge of the component (col. 2, lines 54-62; col. 3 and 4, lines 55-47).

Regarding claim 22, Vilella discloses the method wherein the frequency-specific component comprises a circuit board (abstract).

Regarding claim 23, Vilella discloses the method of claim 22 wherein the frequency-encoded feature comprises a conductive material (col. 8, lines 12-23).

Regarding claim 24, Vilella discloses the method of claim 15 wherein the frequency-specific component comprises a mechanical component (col. 3, lines 21-32).

Regarding claim 25, Vilella discloses the method of claim 24 wherein the mechanical component comprises a cover that covers a mounted component (col. 3, lines 21-32, wherein a plastic cover over electronic component (processor, resistors, etc.) is a mechanical component cover).

Regarding claim 27, Vilella discloses the method of claim 15 wherein the frequency-encoded feature comprises an indication printed on the frequency-specific component (col. 4, lines 26-37).

Regarding claim 32, Vilella discloses the component apparatus of claim 29 wherein the frequency-encoded feature is an optically detectable feature (col. 3 and 4, lines 55-47).

Regarding claim 33, Vilella discloses the method of claim 15, wherein the step of identifying the frequency-encoding feature comprises optically identifying said frequency-encoding feature (col. 3 and 4, lines 55-47).

Regarding claim 34, Beers discloses a sensor being a camera (col. 3 and 4, lines 55-47).

6. Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vilella and Beers as applied to the claims above, and further in view of Official Notice.

7. Regarding claim 26, Vilella nor Beers expressly disclose the frequency encoded feature comprising a bore.

Official notice is taken that a circuit board comprising a bore was well known at the time the invention was made in the analogous art of circuit board manufacturing.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to optically identify a bore of a circuit board. One of ordinary skill in the art would have been motivated to do this since Vilella discloses viewing the entire circuit board (col. 3 and 4, lines 55-47).

Therefore, it would have been obvious to modify Vilella and Beers to obtain the invention as specified in claim 26.

Allowable Subject Matter

8. Claims 16 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES R. KASENGE whose telephone number is (571)272-3743. The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on 571 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CK
March 29, 2010

/Charles R Kasenge/
Primary Examiner, Art Unit 2121